

Mental Health Support Website and Application

Submitted Towards the Partial Fulfillment of the Requirements for the Award of
the Degree of

Bachelors in Technology

by

Aniket Garg (20124011)

Kirandeep Kaur (20124048)

Sajanjit Singh Brar (20124087)

Supreet Kaur (20124100)

Under the Mentorship of

Dr. Vijay Kumar



Department of Information Technology

Dr B.R Ambedkar National Institute of Technology

Jalandhar-144008, Punjab (INDIA)

May 28, 2024

Undertaking

We declare that the project work presented in this report entitled Mental Health Support Website and Application, submitted to the Department of Information Technology, Dr B R Ambedkar National Institute of Technology Jalandhar, for the award of the Bachelor of Technology degree in Information Technology, is our original work. We have not plagiarized or submitted the same work for the award of any other degree. In case this undertaking is found incorrect, we accept that our degree may be unconditionally withdrawn.

Aniket Garg (20124011)

Kirandeep Kaur (20124048)

Sajanjit Singh Brar (20124087)

Supreet Kaur (20124100)

Department of Information Technology

Dr B R Ambedkar National Institute of Technology Jalandhar

Jalandhar, Punjab, India

May, 2024

Certificate

This is to certify that the project report entitled Mental Health Support Website and Application submitted by Aniket Garg (20124011), Kirandeep Kaur (20124048), Sajanjit Singh Brar (20124087), and Supreet Kaur (20124100), to the Dr B R Ambedkar National Institute of Technology Jalandhar, in partial fulfillment for the award of the degree of B. Tech in Information Technology has been carried out under our supervision and that this work has not been submitted elsewhere for a degree.

Dr. Vijay Kumar

Associate Professor

Department of Information Technology,

Dr B R Ambedkar National Institute of Technology Jalandhar

Jalandhar, Punjab, India

May, 2024

Acknowledgments

Before we begin discussing the development of this project, we would like to take a moment to express our gratitude to the individuals and teams who are actively involved in shaping its future. Throughout the phase of developing this website and application, their dedication and contributions made a significant impact.

We extend our appreciation to our mentor Dr.Vijay Kumar who provided us with valuable insights, guidance, and direction as we navigate the complexities of project development. Your expertise is a guiding light on this path. We all thank other faculty members of the Information Technology department for their constant support and assistance.

A special thanks to our dedicated team members who have invested their time, skills, and creativity into this project. Your commitment to excellence and collaborative spirit are the driving forces behind our progress.

We are grateful to have access to a wealth of online and offline resources that serve as valuable references and references. These resources are instrumental in helping us overcome challenges and make informed decisions.

Thank you.

Regards,

Aniket Garg (20124011)

Kirandeep Kaur (20124048)

Sajanjit Singh Brar (20124087)

Supreet Kaur (20124100)

Table of Contents

Undertaking.....	2
Certificate.....	3
Acknowledgments.....	4
Table of Contents.....	5
List of Tables.....	7
List of Figures.....	8
1. Introduction.....	9
1.1. Problem Statement.....	10
1.1.1. Stigma.....	10
1.1.2. Accessibility.....	11
1.1.3. Information Gap.....	11
1.1.4. Mental health Awareness.....	12
1.1.5. Community Support.....	13
1.2 Some more Statistical Data.....	14
2. Literature Review.....	16
2.1. BetterHelp.....	16
2.1.1. Features.....	17
2.1.2. Limitations.....	17
2.2. Psychology Today.....	18
2.2.1. Features.....	19
2.2.2. Limitations.....	19
2.3. 7 Cups.....	20
2.3.1. Features.....	21
2.3.2. Limitations.....	21
2.4. WebMD.....	22
2.4.1. Features.....	23
2.4.2. Limitations.....	23
2.5. Unique in us.....	24
2.5.1. Comprehensive Integration.....	24
2.5.2. Holistic Support Ecosystem.....	24
2.5.2. Empowerment through Assessment Tools.....	24
2.5.3. User-Centric Interface and Accessibility.....	25
2.5.4. Personalized Support Options.....	25
3. Model.....	26
3.1. System Diagrams.....	26
3.1.1. Use Case Diagram.....	27
3.1.2. Class Diagram.....	28
3.1.3. Activity Diagram.....	29

3.1.4. Sequence Diagram.....	30
3.2 Snapshots.....	31
3.2.1. Website.....	31
3.2.2. Chatbot.....	31
4. Proposed Work.....	32
4.1. Tools and Technologies Used.....	32
4.2. Components of the website.....	32
4.2.1. Homepage.....	33
4.2.2. Find Help.....	34
4.2.3. Library.....	35
4.2.4. Submit a Blog.....	36
4.2.5. MH Evaluation.....	36
4.2.6. Admin Controls.....	37
4.2.7. AI Chatbot.....	37
4.2.8. Mobile Application.....	37
5. Results and Discussion.....	38
5.1. Mental Health Prevalence.....	38
5.2. Addressing Key Challenges.....	39
5.2.1. Stigma Reduction.....	39
5.2.2. Enhanced Accessibility.....	39
5.2.3. Information Dissemination.....	40
5.2.4. Mental Health Literacy.....	40
5.2.5. Community Engagement.....	40
5.3. Discussion.....	40
References.....	41
Appendix.....	42

List of Tables

1. Prevalence of mental illnesses in India.....	16
--	-----------

List of Figures

1. How would you describe a person with mental illness?.....	10
2. Three Broad Segments.....	12
3. Number of lifetime prevalent cases of anxiety disorders.....	13
4. Feelings towards Mental Illnesses.....	14
5. Burden of disease from each category of mental illness.....	15
6. BetterHelp Homepage.....	17
7. Psychology Today Homepage.....	19
8. 7 Cups Homepage.....	21
9. WebMD Homepage.....	23
10. Use Case Diagram.....	27
11. Class Diagram.....	28
12. Activity Diagram.....	29
13. Sequence Diagram.....	30
14. Website UI on desktop and smartphone.....	31
15. Chatbot UI.....	31

1. Introduction

This project aims to provide a platform where individuals can find easy access to mental health professionals, reliable information, and tools to assess and enhance their mental well-being. The purpose of the Mental Health Support Website is to establish a comprehensive platform dedicated to addressing the increasing concerns surrounding mental health. This project aims to create a user-friendly website that facilitates easy access to mental health professionals, reliable information, and tools designed to assess and improve mental well-being.

In today's fast-paced and interconnected world, the discourse around mental health has gained unprecedented momentum and importance. As we navigate the complexities of modern life, it becomes increasingly evident that mental health issues are not only prevalent but also profoundly impactful. Recognizing the urgency of addressing these concerns, we present the Mental Health Support Website project. Our project emerges as a comprehensive platform designed to tackle the growing challenges surrounding mental well-being. It is an initiative born out of a profound understanding of the struggles individuals face and a resolute commitment to providing them with the support, information, and tools they need.

The Mental Health Support Website project envisions a world where seeking assistance for mental health concerns is as natural as seeking help for physical health issues. We are dedicated to breaking down the barriers of stigma and providing a discreet and compassionate environment where individuals can freely seek help without fear of judgment. Central to our mission is the facilitation of direct access to mental health professionals who can offer guidance, therapy, and expertise. In a world where distances and barriers can hinder access to care, our platform strives to bridge the gap, making it easier for individuals, particularly in Punjab, India, to connect with psychiatrists and mental health professionals.

Beyond connecting users with professionals, we are committed to arming individuals with knowledge. Our information library serves as a trusted resource, offering medically accurate articles on a wide range of mental health topics. We believe that knowledge empowers individuals to make informed decisions and foster a deeper understanding of mental health conditions.

In addition to professional guidance and information, our platform provides interactive tools for self-assessment and improvement. We believe that promoting self-awareness and offering psychological tests can be pivotal in an individual's journey towards mental well-being. As we embark on this transformative journey, we extend an invitation to you to join us in our mission to promote mental health awareness and well-being. Together, we can cultivate a supportive community where individuals can find the solace, strength, and resources they need to navigate the intricacies of mental health. Welcome to the Mental Health Support Website – a sanctuary of care, knowledge, and empowerment, dedicated to catalyzing positive change in the realm of mental health.

1.1. Problem Statement

The scope of this project encompasses the end-to-end design, development, and deployment of the Mental Health Support Website. The website will serve as a vital resource for individuals seeking information, support, and guidance related to mental health issues. It is not limited to a specific demographic and will be accessible to users in Punjab, India.

The Mental Health Support Website aims to address these challenges:

1.1.1. Stigma

The stigma surrounding mental health often prevents individuals from seeking the support they need. Our Mental Health Support Website aims to dismantle this barrier by providing a discreet and confidential platform. By offering a safe space where users can seek guidance and assistance without fear of judgment, we aim to empower individuals to overcome the reluctance associated with seeking help for mental health issues. Through secure channels and a supportive environment, users can access resources, connect with professionals, and engage with tools while maintaining their privacy and confidentiality. Figure 1 below shows the stigma associated with mental health in three broad segments.

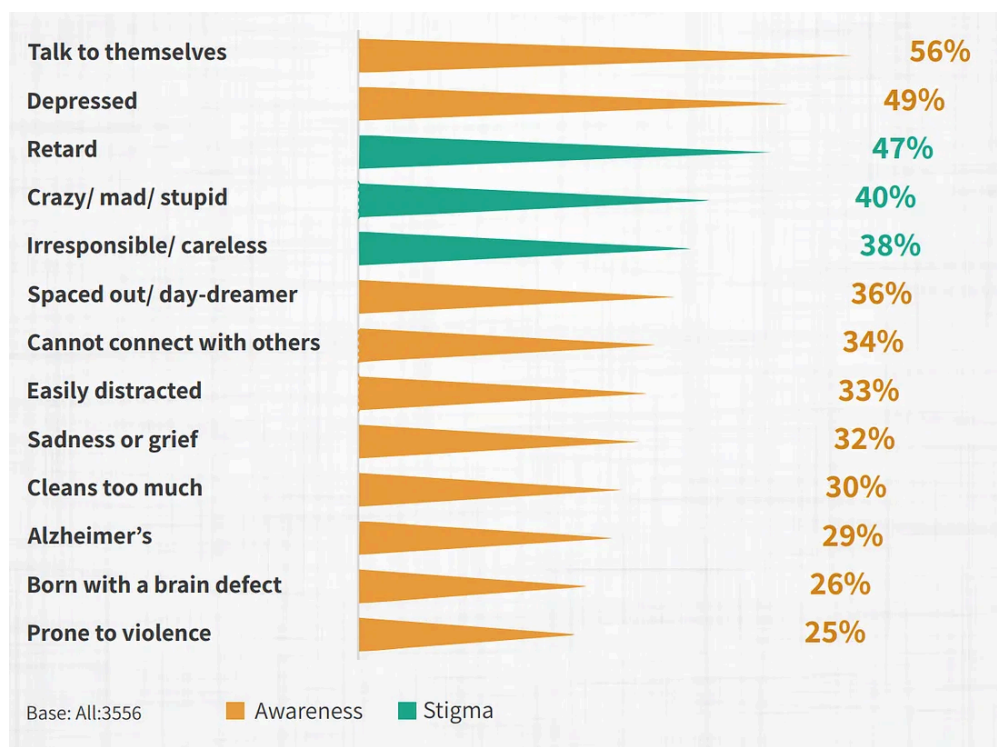


Fig 1. How would you describe a person with mental illness?
Source: How India Perceives Mental Health: TLLLF National Survey Report 2018

Mental health is a topic that is often stigmatized in India. According to a study conducted by the World Health Organization in 2015, one in five Indians may suffer from depression in their lifetime, equivalent

to 200 million people. However, due to the stigma associated with mental illness, a lack of awareness, and limited access to professional help, only 10-12% of these sufferers will seek help. The same study showed that while 87% of the respondents showed some awareness of mental illness, 71% also used terms associated with stigma. This shows that stigma and awareness are two separate issues although interlinked. They need to be addressed in parallel in order to tackle the burden of mental illness in India. As of 2017, more than 14 percent of the total population in India suffer from variations of mental disorders. The majority of this share includes older adult females in India. Projections show that India will suffer massive economic losses owing to mental health conditions. With the Covid-19 pandemic, these numbers are sure to have risen.

1.1.2. Accessibility

In certain regions, access to mental health professionals remains limited, posing a significant challenge for individuals seeking support. Recognizing this hurdle, our website takes a proactive approach by providing contact information for nearby psychiatrists and mental health professionals in Punjab, India. By centralizing this vital information, we strive to facilitate easier access to mental health services, bridging the gap between those in need and the available support systems. This initiative aims to ensure that geographical constraints do not hinder individuals from accessing essential mental health care.

According to the National Mental Health Survey (NMHS) -2016, more than 80% of people in India are not able to access treatment due to lack of mental health specialists and proper infrastructure. India has only 0.29 psychiatrists and 0.07 psychologists per 100,000 population, according to a WHO study. The Mental Healthcare Act (MHCA) under section 18(2) states that all persons, irrespective of whether or not they have a mental illness, have the right to access mental healthcare treatment and services that must be of affordable cost, of good quality, available in sufficient quantity, and accessible geographically without discrimination. The Lancet study and Global Health Data Exchange estimate that between 70% and 92% of persons in need of mental healthcare are unable to access quality services. Over 10% of Indian adults, approximately 150 million people, live with a mental health disorder and are in need of support services. With 80% of healthcare in India being delivered by the private sector, the affordability of mental healthcare has always been a challenge. Income has been the most commonly identified cause of inequity in healthcare in the country (61.2%) followed by education (45.4%) and gender (36.1%). It is crucial to critically evaluate the current care models available and focus on innovative delivery models that will help bridge the wide care gap. The community-based model can act as a potent care delivery mechanism in India's context to expand the coverage of mental health services. Non-specialist programs and technology-based interventions can also be leveraged to address gaps in capacity by overhauling the current care delivery model.

1.1.3. Information Gap

The scarcity of easily accessible and medically accurate information on mental health contributes to misconceptions and lack of understanding. To combat this, our website boasts an expansive information library meticulously curated to bridge this informational void. The content within this repository comprises credible, up-to-date resources covering a wide spectrum of mental health topics. By ensuring

the availability of reliable information, our platform empowers users with knowledge, fostering informed decisions, and deeper comprehension of mental health conditions.

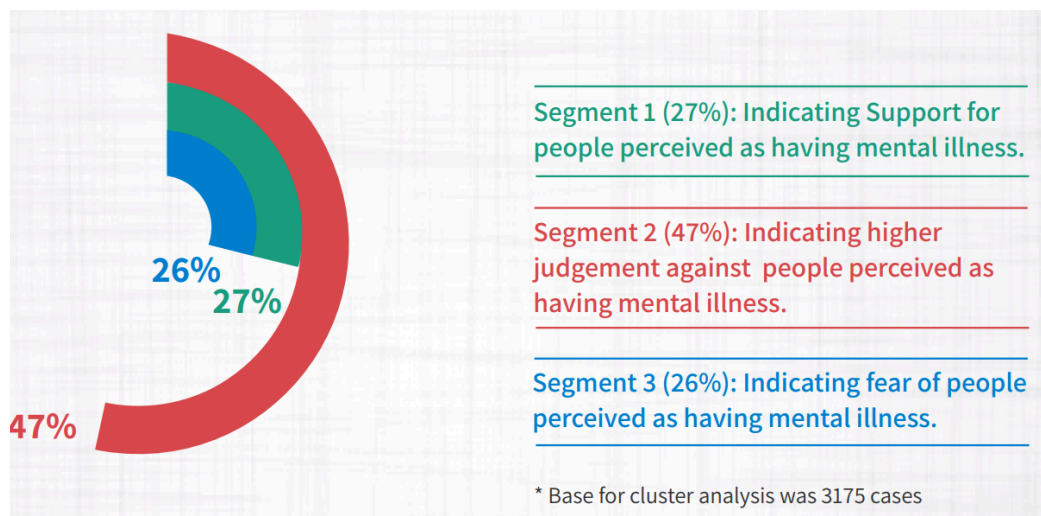


Fig 2. Three Broad Segments.

Source: How India Perceives Mental Health: TLLLF National Survey Report 2018

1.1.4. Mental health Awareness

Raising awareness about mental health is crucial in addressing the prevailing lack of understanding. Our platform is designed to serve as an educational resource, providing not only informative articles but also psychology tests aimed at increasing awareness and knowledge. These resources are strategically integrated to encourage engagement and promote mental health literacy. By offering accessible tools for self-assessment and educational content, we aim to equip individuals with the understanding needed to recognize, address, and advocate for mental well-being.

Mental health awareness has been gaining momentum worldwide in recent years. The World Health Organization (WHO) has been at the forefront of this movement, highlighting the importance of mental health in achieving global development goals. Depression is one of the leading causes of disability worldwide, and suicide is the fourth leading cause of death among 15-29-year-olds. Mental, neurological, and substance use disorders make up 10% of the global burden of disease and 25.1% of non-fatal disease burden. Despite progress in some countries, people with mental health conditions often experience severe human rights violations, discrimination, and stigma. Many mental health conditions can be effectively treated at relatively low cost, yet the gap between people needing care and those with access to care remains substantial. Global estimates of people receiving care for specific mental health conditions remained less than 50%, with a global median of 40% of people with depression and just 29% of people with psychosis receiving care. Increased investment is required on all fronts: for mental health awareness to increase understanding and reduce stigma; for efforts to increase access to quality mental health care and effective treatments; and for research to identify new treatments and improve existing treatments for

all mental disorders. In 2019, WHO launched the WHO Special Initiative for Mental Health (2019-2023): Universal Health Coverage for Mental Health to ensure access to quality and affordable care for mental health conditions in 12 priority countries to 100 million more people. In 2022, WHO launched the World Mental Health Report: Transforming Mental Health for All.

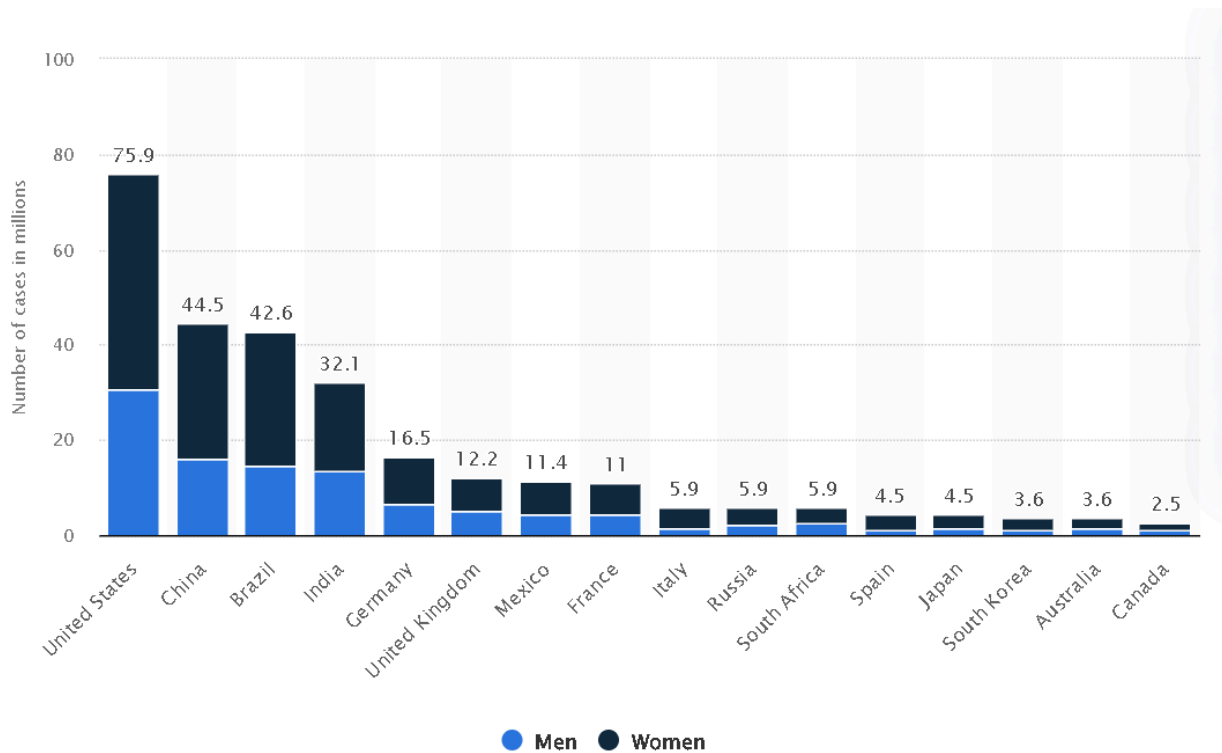


Fig 3. Number of lifetime prevalent cases of anxiety disorders among adults worldwide in 2018 (in millions).

Source: Statista (<https://www.statista.com/statistics/1115900/>)

1.1.5. Community Support

The power of shared experiences in fostering healing and support cannot be overstated. Through the blog feature, our platform facilitates a community-centric approach, allowing users to share their personal mental health journeys. This inclusive space encourages storytelling, empathy, and mutual support. By enabling individuals to voice their experiences, challenges, and triumphs, we aim to cultivate a compassionate and supportive community. This feature embodies our commitment to nurturing an environment where individuals feel validated, heard, and understood, fostering solidarity and resilience in the face of mental health challenges. Figure 2 below shows how people in the community perceive mental health. The following statistics make community support even more important:

- Anxiety affects 284 million people in the world.
- Depression affects 264 million people.
- Alcohol use disorder affects 107 million people.
- Drug use disorder affects 71 million people.

- Bipolar disorder affects 46 million people.
- Schizophrenia affects 20 million people.
- Eating disorders affect 16 million people.

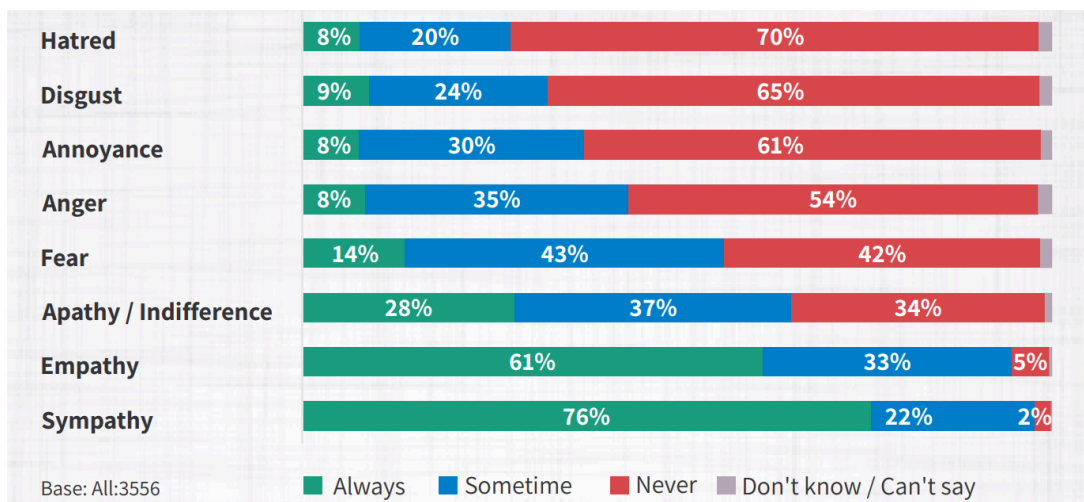


Fig 4. Feelings towards Mental Illnesses.

Source: How India Perceives Mental Health: TLLLF National Survey Report 2018

1.2 Some more Statistical Data

According to the **National Mental Health Survey of India, 2015-16**, the prevalence of mental illness in India is 10.6%. In Punjab, the total lifetime prevalence of mental illnesses was 18% and the current prevalence was 13%. The survey found that every 6th Punjabi has suffered from mental illness and every 8th is still suffering. Depression alone affected 45.7 million people in India. Anxiety disorders affected 44.9 million people. States and Union territories like Daman and Diu, Himachal Pradesh, Sikkim, Lakshadweep, Maharashtra, Telangana, Punjab, and Uttarakhand reported higher healthcare burden due to mental illness than the national average for India.

Here are some key statistics regarding mental health in India and Punjab:

- The total lifetime prevalence of mental illnesses in Punjab was 18% and the current prevalence was 13%.
- Every 6th Punjabi has suffered from mental illness and every 8th is still suffering.
- Depression alone affected 45.7 million people in India.
- Anxiety disorders affected 44.9 million people in India.
- States and Union territories like Daman and Diu, Himachal Pradesh, Sikkim, Lakshadweep, Maharashtra, Telangana, Punjab, and Uttarakhand reported higher healthcare burden due to mental illness than the national average for India.
- According to a survey conducted in 2020, Punjab has seen a significant rise in mental health issues, with a reported increase of 42% in cases of anxiety and depression.
- The National Mental Health Survey of India (2015-16) revealed that Punjab had a higher prevalence of mental disorders compared to the national average.

- The stigma associated with mental health issues often prevents individuals from seeking help. Only 10% of those in need of mental health services actually receive treatment.

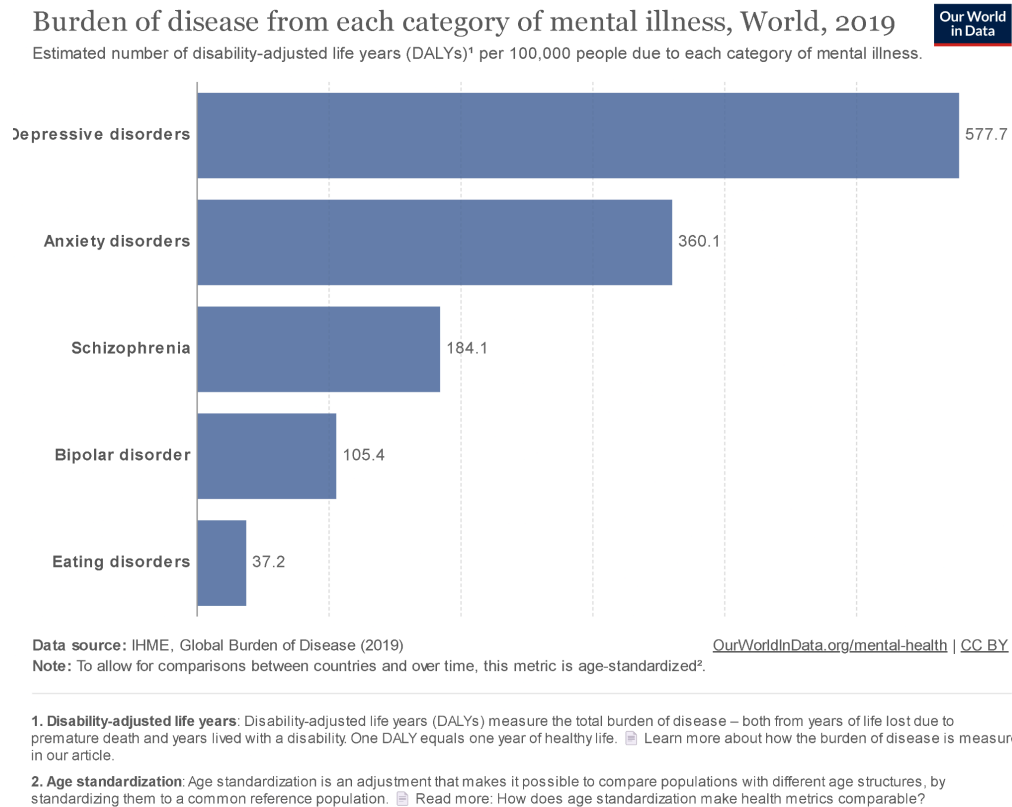


Fig 5. Burden of disease from each category of mental illness.

Source: Our World in Data (www.ourworldindata.org)

Entity	Year	Depressive Disorders	Schizophrenia	Bipolar Disorder	Anxiety Disorders
India	2011	625.1265	177.60297	75.148735	280.5263
India	2012	624.27856	178.51956	75.12617	282.11465
India	2013	624.13824	179.58603	75.186195	283.5166
India	2014	624.2207	180.58412	75.20974	284.6553
India	2015	623.9644	181.19757	75.17389	285.53076
India	2016	623.63855	181.6862	75.20527	286.3654
India	2017	623.1486	182.03555	75.23733	286.72156
India	2018	620.723	181.51364	75.22718	284.22504
India	2019	616.13	180.38898	75.254654	278.50314
per 100,000 people in, both sexes aged age-standardized					

Table 1. Prevalence of mental illnesses in India.

Source: Our World in Data (www.ourworldindata.org)

2. Literature Review

2.1. BetterHelp

BetterHelp is an online therapy platform that offers convenient access to mental health professionals. BetterHelp is an online counseling platform that provides virtual therapy with licensed and accredited therapists via chat, phone calls, and video calls. It is the world's largest online counseling platform, with over 23,000 licensed therapists serving over 2.5 million customers. BetterHelp uses a monthly membership payment plan, but you can cancel your membership at any time. It also provides additional services like journaling and group therapy sessions. BetterHelp has expanded its services in recent years and now partners with businesses and universities. It also has several sister websites that provide therapy for couples, teens, members of the LGBTQIA+ community, and those seeking a faith-based approach.

BetterHelp has some limitations that users have experienced. For instance, it does not provide psychiatry services, and thus those who require medications for the management of their symptoms will have to look elsewhere. The mental health professionals on this platform are legally not allowed to diagnose mental health conditions. Counselors can't diagnose mental health conditions through BetterHelp. However, therapists who have the appropriate licenses can diagnose conditions. BetterHelp therapists can provide talk therapy, but they can't diagnose a mental health condition, prescribe medications, or fulfill a court order. BetterHelp doesn't provide therapy for kids or teens. Despite these limitations, BetterHelp is rated as a top teletherapy platform for a variety of mental health concerns. Users generally report positive experiences with BetterHelp's network of therapists, services, and features. If you want to give web-based therapy a try, BetterHelp is a good option. The company offers a free 7-day trial.

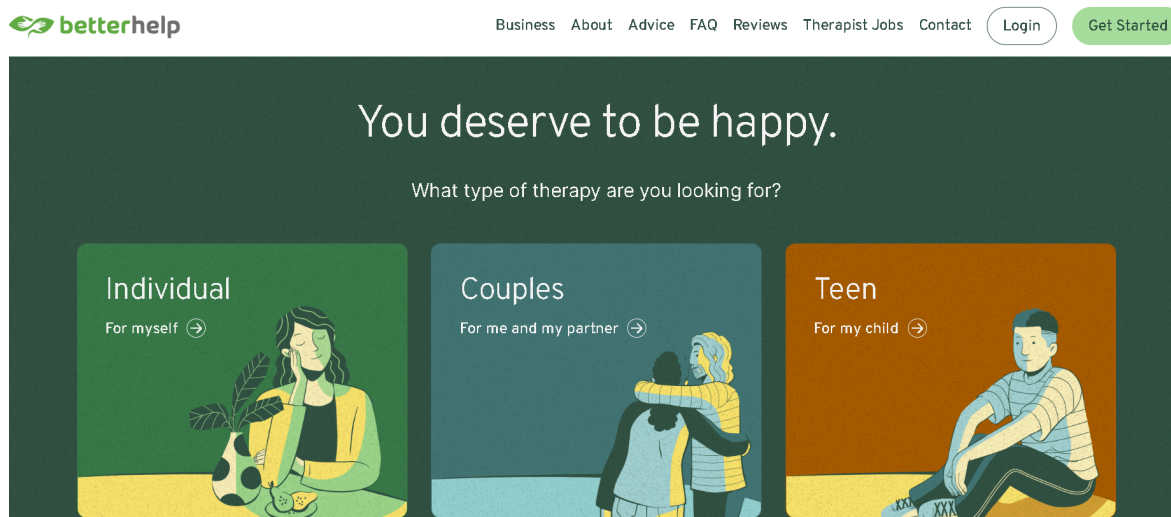


Fig 6. BetterHelp Homepage

2.1.1. Features

Online Therapy Sessions: BetterHelp offers therapy sessions conducted entirely online, ensuring accessibility regardless of location. This feature allows users to engage with licensed professionals remotely, removing geographical barriers to mental health support.

Chat Support: Users can engage in text-based chat support with trained professionals, providing immediate assistance and fostering a sense of connection. This asynchronous communication channel ensures users can seek guidance between scheduled sessions.

Access to Licensed Therapists: BetterHelp connects users with licensed therapists, ensuring professionalism and expertise in the support provided. The platform emphasizes matching users with therapists suited to their specific needs.

Accessibility and Convenience: BetterHelp allows users to access therapy from anywhere with an internet connection, eliminating geographical barriers. It offers flexible scheduling, allowing users to communicate with therapists through messaging, live chat, phone calls, or video sessions, catering to various preferences and needs.

Diverse Therapist Pool: The platform boasts a diverse pool of licensed therapists, offering users a range of specialties and backgrounds to choose from. Users can switch therapists if the current match doesn't meet their needs, ensuring a better fit for individual preferences.

Privacy and Anonymity: The platform allows users to maintain anonymity, fostering a sense of privacy and comfort, which can be beneficial for individuals hesitant about seeking therapy. Users can communicate with their therapists at their own pace through messaging, allowing for ongoing support and the convenience of expressing thoughts and feelings as they arise.

2.1.2. Limitations

Paid Service: BetterHelp operates on a subscription-based model, which might limit accessibility for individuals with financial constraints. The service's cost may exclude those in need of affordable mental health support.

Focus on Counseling: While excelling in offering counseling and therapy, BetterHelp's primary focus might limit access to comprehensive mental health information or self-help resources.

Lack of In-Person Interaction: Some individuals might find the absence of face-to-face interaction a limitation, as non-verbal cues can be crucial in therapy, and some issues might be better addressed in person.

Response Time: While the platform aims for timely responses, the nature of asynchronous communication (like messaging) can lead to delayed responses, which might not suit urgent needs.

Limited Insurance Coverage: While BetterHelp offers affordability, it might not be covered by all insurance plans, limiting accessibility for some individuals. Therapists on BetterHelp are licensed in specific states or countries, limiting the pool of available therapists for users based on their location.

Tech Issues and Comfort Level: Technical glitches or discomfort with using online platforms might hinder the therapy experience for some users.

2.2. Psychology Today

Psychology Today is a platform that provides a range of resources for individuals seeking information on mental health, therapy, and related topics. The platform offers a variety of features that can be useful for people looking to learn more about these topics or find a therapist. One of the key features of Psychology Today is its directory of therapists. This directory allows users to search for therapists in their area based on a variety of criteria, including location, specialty, and insurance. Users can also read reviews of therapists from other users to help them make an informed decision. Another feature of Psychology Today is its blog section. The blog features articles written by mental health professionals on a variety of topics related to mental health and therapy. This platform allows users to connect with therapists online for remote therapy sessions. Sessions is a HIPAA-compliant platform that is available exclusively to Psychology Today members and their patients.

While Psychology Today offers many useful features, there are also some limitations to the platform. For example, the directory of therapists may not include all therapists in a given area, and the reviews of therapists may not be entirely reliable. Additionally, while Sessions can be a convenient way to access therapy, it may not be suitable for everyone, and some people may prefer in-person therapy. Overall, Psychology Today is a valuable resource for people looking to learn more about mental health and therapy. However, it is important to keep in mind the limitations of the platform and to do additional research when making important decisions about mental health care.

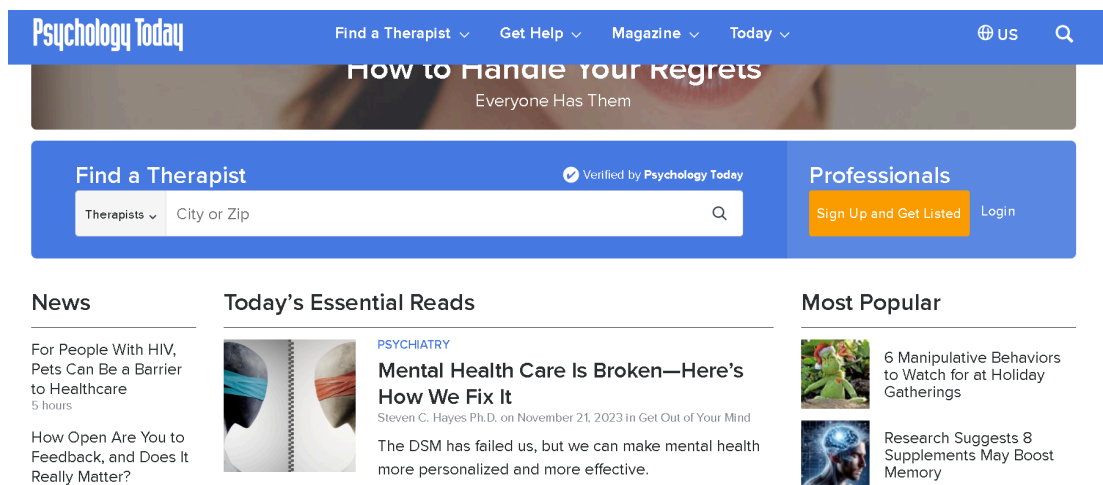


Fig 7. Psychology Today Homepage

2.2.1. Features

Directory of Mental Health Professionals: Psychology Today serves as a comprehensive directory, allowing users to search for mental health professionals based on location and specialties. Users can refine searches based on specific therapy approaches, aiding in finding the right therapist.

Informative Articles: The platform offers a broad range of informative articles covering various mental health topics. These articles provide valuable insights into conditions, therapies, and coping strategies.

Therapist Profiles and Directory: Detailed profiles of mental health professionals assist users in making informed decisions when selecting therapists. Profiles often include bios, treatment approaches, and contact information. One of its key features is a comprehensive directory of therapists, counselors, psychiatrists, and treatment centers. Users can search based on location, specialty, insurance coverage, and therapeutic approach, making it easier to find professionals tailored to individual needs.

Extensive Content Library: Psychology Today hosts a vast repository of articles, blog posts, and expert-contributed content covering various mental health topics, therapy approaches, self-help techniques, and more. This content is often informative and accessible to a broad audience.

Informative Tools and Resources: The platform offers quizzes, self-assessment tools, and resources that can aid individuals in understanding their mental health concerns, providing insights and guidance on potential next steps. Through forums and discussion boards, Psychology Today fosters a sense of community where individuals can share experiences, seek advice, and find support from others facing similar challenges.

Current News and Research: It frequently updates its content with the latest news, research findings, and trends in the field of psychology and mental health, keeping users informed about new developments and treatment options.

2.2.2. Limitations

Limited Interactivity: Psychology Today lacks certain interactive features found on other platforms, such as psychological tests or assessments, limiting users in self-evaluation.

Absence of Psychological Tests: The platform does not offer psychological assessments or tests for users to gain insights into their mental well-being, restricting the platform's scope beyond informational articles and therapist directories.

Quality Control and Accuracy: While Psychology Today hosts a wealth of information, the quality and accuracy of the content may vary. Some articles may lack empirical evidence or rigorous sourcing, potentially leading to misinformation or oversimplification of complex psychological concepts.

Therapist Directory Validation: While the therapist directory is extensive, the platform's vetting process for professionals listed might vary. Users should conduct their own research and assessments when choosing a therapist, as the directory might not guarantee the quality or suitability of listed practitioners.

Limited Depth in Specialized Topics: While it covers a broad spectrum of mental health topics, in-depth or highly specialized subjects might not be thoroughly covered. Users seeking specialized information may find the content somewhat generalized.

Lack of Personalization: While the directory allows for filtered searches based on criteria like location and specialty, the platform might lack the ability to deeply personalize recommendations based on individual needs or preferences. The forums and community spaces might lack rigorous moderation, potentially leading to misinformation, insensitive advice, or unverified claims by users.

2.3. 7 Cups

7 Cups is an online platform that provides free and confidential emotional support to people who are struggling with mental health issues. The platform offers a range of services, including counseling, emotional support from trained volunteers, and peer support via chat rooms or message boards. One of the key features of 7 Cups is that it provides free access to community chat rooms and message boards, where users can connect with trained listeners who volunteer their time to provide support. These listeners have a range of experiences and backgrounds, and many have personal or professional experience with mental health symptoms. Additionally, 7 Cups offers therapy for users aged 18 and up, which is available for a monthly subscription fee. Another advantage of 7 Cups is that it provides dedicated support forums for teens aged 13 to 17, which can be accessed by anyone over the age of 13 ¹. The service can match users with any available listener, but they can also review profiles and request to speak with someone specific.

However, there are some limitations to the 7 Cups platform. For instance, the dashboard features a lot of information that can make it feel overwhelming to navigate ³. Additionally, if users are looking for someone to talk to, 7 Cups can be a hit-or-miss experience, as the quality of care can vary depending on the listener. In conclusion, 7 Cups is a valuable resource for people who are struggling with mental health issues and need emotional support. The platform offers a range of services, including counseling, emotional support from trained volunteers, and peer support via chat rooms or message boards. However, users should be aware of the limitations of the platform, such as the overwhelming dashboard and the variability in the quality of care provided by listeners.

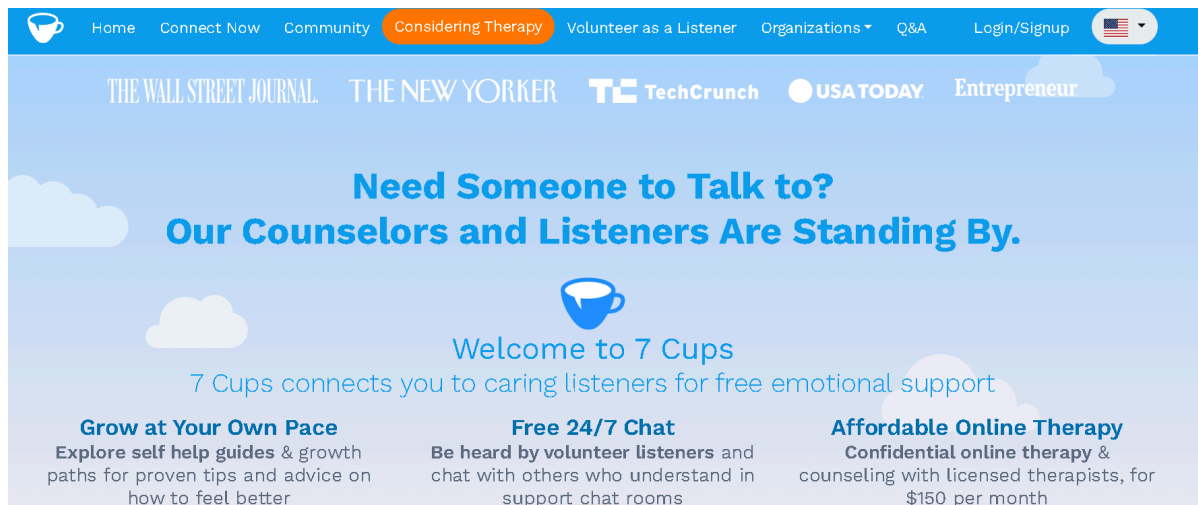


Fig 8. 7 Cups Homepage

2.3.1. Features

Peer Support Chat: 7 Cups provides a platform for individuals to engage in peer-to-peer chat support, fostering a sense of community and understanding. This feature allows users to share experiences and receive empathy from peers. One of the key features of 7 Cups is the ability to seek support anonymously. This anonymity allows users to open up about their concerns without the fear of judgment or stigma.

Self-Help Articles: Users can access a variety of self-help articles covering a range of mental health topics. These resources offer guidance and support for individuals seeking self-directed help.

Trained Listeners: The platform boasts a large community of trained listeners who offer empathetic, non-judgmental support to individuals seeking someone to talk to. These listeners provide emotional support and a compassionate ear for those in distress.

Therapist Matching: 7 Cups offers the option to connect with licensed therapists for more structured counseling sessions. Users can choose therapists based on their preferences and needs, providing a more personalized experience. The platform offers support for various mental health concerns, including anxiety, depression, relationships, LGBTQ+ issues, and more. This diversity allows users to find support tailored to their specific challenges.

Community Forums: Users can engage in community forums where they can discuss mental health-related topics, share experiences, and find support from others who may have similar experiences. 7 Cups provides a range of self-help resources, such as articles, exercises, and guided self-help paths, to empower individuals in managing their mental health.

2.3.2. Limitations

Limited Professional Input: Primarily relying on peer support, 7 Cups might lack the same level of professional guidance as platforms like BetterHelp. The absence of licensed professionals may limit the

depth of support provided. While the platform offers trained listeners and access to therapists, the support provided by listeners does not substitute for professional therapy. It may lack the depth and expertise required for certain complex mental health issues.

Narrow Range of Mental Health Topics: While covering essential topics, 7 Cups might not offer extensive resources on various mental health issues, potentially limiting support for users requiring specific information or guidance.

Limited Therapist Availability: The availability of licensed therapists might be limited based on geographic location or demand, leading to potential delays in accessing professional counseling. 7 Cups isn't designed for immediate crisis intervention. In situations requiring urgent help, individuals should contact emergency services or hotlines designed for immediate support.

Anonymity Challenges: While anonymity is a significant advantage, it can also present challenges in terms of ensuring the quality and reliability of the support provided by listeners, as there might be varying levels of training and experience among them. Despite the anonymity, there might be concerns about data privacy and security, especially when sharing personal information or engaging in therapeutic sessions.

Subscription Costs: While some features are available for free, access to licensed therapists may require a subscription or payment, making it less accessible to individuals with financial constraints. The platform's services, especially when using listeners, may not always provide the level of personalization or continuity of care that an individual might need for long-term mental health management.

2.4. WebMD

WebMD is a popular online platform that provides health information services and tools. It has consistently been ranked among the most trusted brands in the U.S. by Millward Brown. The platform allows users to list their symptoms and see what the probable causes are. This is done either by searching the symptoms directly, or clicking through diagrams of the anatomy and selecting suggestions for what your symptoms may be. Once the symptoms are submitted, a list pops up of the potential ailments that the platform believes may explain the symptoms. WebMD provides easy and immediate access to knowledge about what could potentially be wrong with us. This allows us to gauge the severity of our illness without taking time out of our day to visit the doctor and potentially pay them a large fee to tell us to “rest up and drink plenty of fluids”. There are examples of people using WebMD or googling symptoms to find out that their ailments could easily be cured with something readily available at home or prescription-free from a pharmacy.

However, there are several limitations to using the platform. Firstly, self-diagnosis is not a grand idea. Namely, we haven't seen WebMD's medical qualifications - where did this great wide interweb doctor do his 7 years of medical school? More importantly, if you're self diagnosing with your laptop, there goes your chance of getting a lollipop from the nurse for being a good patient¹. Secondly, the platform may not be able to provide accurate diagnosis for complex medical conditions. In such cases, it is always advisable

to consult a doctor. In conclusion, WebMD is a useful platform for providing quick and easy access to health information.

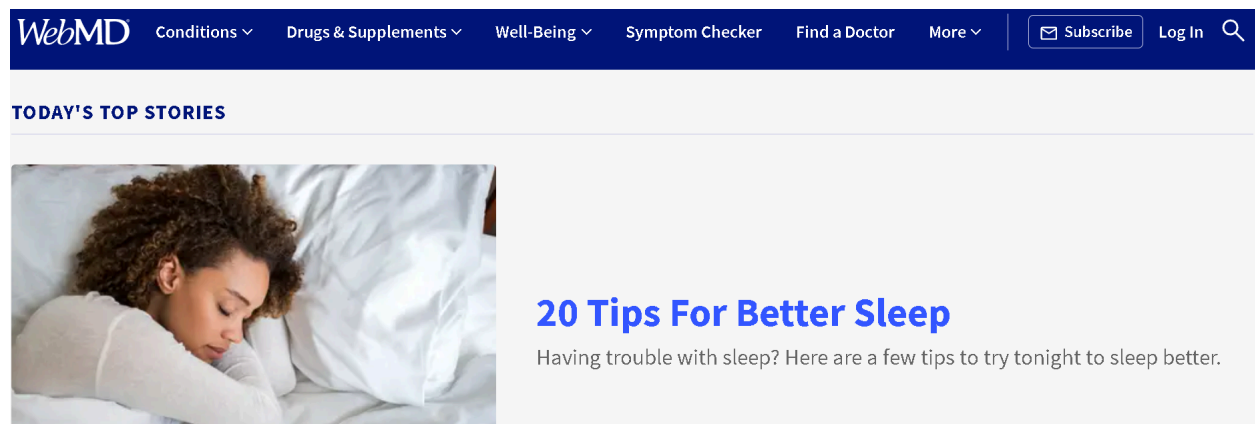


Fig 9. WebMD Homepage.

2.4.1. Features

Comprehensive Medical Information: WebMD offers a vast database of medical information, including articles on various health conditions. Users can access resources covering mental health among other health-related topics. WebMD hosts an extensive database of health-related articles, covering various medical conditions, treatments, medications, and lifestyle advice. This wealth of information serves as a starting point for individuals seeking to understand health concerns.

Health and Symptoms Checker: Provides tools for users to check symptoms and gather information about potential health concerns. This feature allows users to self-assess and gain insights into health issues. The platform provides a symptom checker tool that allows users to input their symptoms and receive potential condition matches. This tool can offer a preliminary idea of potential health issues, although it's not a substitute for professional medical advice.

Health News and Updates: WebMD offers up-to-date health news and trends, providing users with information on the latest research findings, health breakthroughs, and public health concerns. The platform features contributions from healthcare professionals and experts, providing authoritative content on various medical topics. This content adds credibility and depth to the information provided.

Community Forums: WebMD hosts community forums where users can share their experiences, ask questions, and seek advice from peers. These forums create a sense of community support among individuals dealing with similar health issues.

2.4.2. Limitations

Not Specialized in Mental Health: While valuable for general health information, WebMD might not specialize in providing in-depth mental health content. Users might not find highly specialized mental health resources compared to dedicated mental health platforms. While WebMD offers a wealth of

information, it's important to note that the content tends to be generalized and may not address individual differences or nuances in health conditions. This could lead to self-diagnosis or unnecessary concern.

Lacks Direct Professional Contact: The platform lacks features to directly connect users with mental health professionals for therapy or counseling, potentially limiting access to immediate support. The platform explicitly states that its content is for informational purposes only and should not replace professional medical advice. Relying solely on WebMD for diagnosis or treatment guidance can be risky and may lead to misinterpretation or misunderstanding of medical conditions.

Potential for Anxiety or Overreaction: Detailed descriptions of symptoms and conditions may cause heightened anxiety or unnecessary concern among users, especially if they misinterpret or inaccurately apply the information to their own situation.

Limited Context and Depth: While articles and resources are informative, they may lack the depth or context needed for a comprehensive understanding of complex medical issues. Users might need to seek additional sources for a more thorough understanding.

Risk of Inaccurate Information: Though WebMD strives for accuracy, errors or outdated information might exist. Users should cross-reference information from multiple reputable sources to ensure accuracy and reliability.

2.5. Unique in us

2.5.1. Comprehensive Integration

Our platform stands out due to its holistic approach in consolidating diverse mental health resources. Unlike previous websites that might specialize in singular aspects, we've amalgamated professional help articles, medical insights, peer sport blogs, and psychological assessments. This integration provides users with a comprehensive understanding of mental health, catering to various preferences and needs within a singular space.

2.5.2. Holistic Support Ecosystem

One of our unique strengths lies in the balance between professional expertise and relatable community support. By incorporating professional articles and medical insights alongside peer sport blogs, we've created a symbiotic environment. Users benefit from validated information while also gaining empathy and relatability through peer experiences. This holistic ecosystem fosters a sense of community while providing factual knowledge, catering to diverse user preferences.

2.5.2. Empowerment through Assessment Tools

Setting us apart from other platforms, we offer a suite of psychological assessments, including IQ tests, EQ tests, and more. These tools empower individuals by facilitating self-reflection and exploration of

their cognitive and emotional capabilities. By providing these assessment options, we encourage self-awareness and potential identification of areas for personal growth or seeking specific support.

2.5.3. User-Centric Interface and Accessibility

Our focus on user experience ensures that individuals can effortlessly navigate the website. We prioritize a user-friendly interface, intuitive design, and seamless navigation, eliminating unnecessary hurdles. By offering an easily accessible platform, users can focus on exploring content, taking tests, or seeking help without encountering barriers.

2.5.4. Personalized Support Options

Our platform caters to a broad spectrum of users by providing varied resources. Whether someone seeks clinical insights or resonates more with personal narratives shared in sport blogs, our diverse offerings cater to individual preferences. This personalized approach allows users to find the support that aligns with their unique needs, promoting inclusivity and individualized wellness journeys.

In summary, our platform distinguishes itself through its comprehensive integration of resources, holistic support ecosystem, empowerment via assessment tools, user-centric design, and personalized support options. These unique aspects collectively create a dynamic and inclusive space for mental health exploration, support, and self-improvement.

3. Model

3.1. System Diagrams

Visual representations of the system's architecture and components.

In a mental health sports website project, various UML (Unified Modeling Language) diagrams play crucial roles in understanding, designing, and communicating the system's architecture, functionalities, and interactions. Here's an overview of the key UML diagrams and their significance:

Use Case Diagram:

The Use Case Diagram illustrates the system's functionalities from a user's perspective. It outlines different user roles, their interactions with the system, and the specific actions or services the system provides. For a mental health sports website, this diagram would showcase functionalities like user registration, accessing articles, taking psychological tests, interacting with the community forums, and seeking professional help. It's pivotal in understanding user-system interactions and defining system boundaries.

Class Diagram:

The Class Diagram represents the system's static structure by illustrating the relationships, attributes, and methods of classes within the system. In the context of the website, it would delineate entities like users, articles, tests, forums, professionals, and their relationships. This diagram aids in visualizing the system's data structure and facilitates the creation of a robust, scalable, and organized system architecture.

Activity Diagram:

Activity Diagrams showcase the flow of activities or processes within the system, highlighting the sequence of actions or workflows. For the mental health sports website, an activity diagram might illustrate the process flow for user registration, taking psychological tests, posting in forums, accessing articles, or seeking professional help. This diagram is instrumental in understanding the system's operational flow and identifying potential bottlenecks or optimizations.

Sequence Diagram:

Sequence Diagrams depict interactions between various system components or objects over time, showcasing the order of messages exchanged among them. In the context of the website, a sequence diagram might illustrate the process of a user accessing an article, interacting with the community, or seeking professional help. This diagram aids in understanding the dynamic behavior of the system and ensures the smooth interaction between different components.

3.1.1. Use Case Diagram

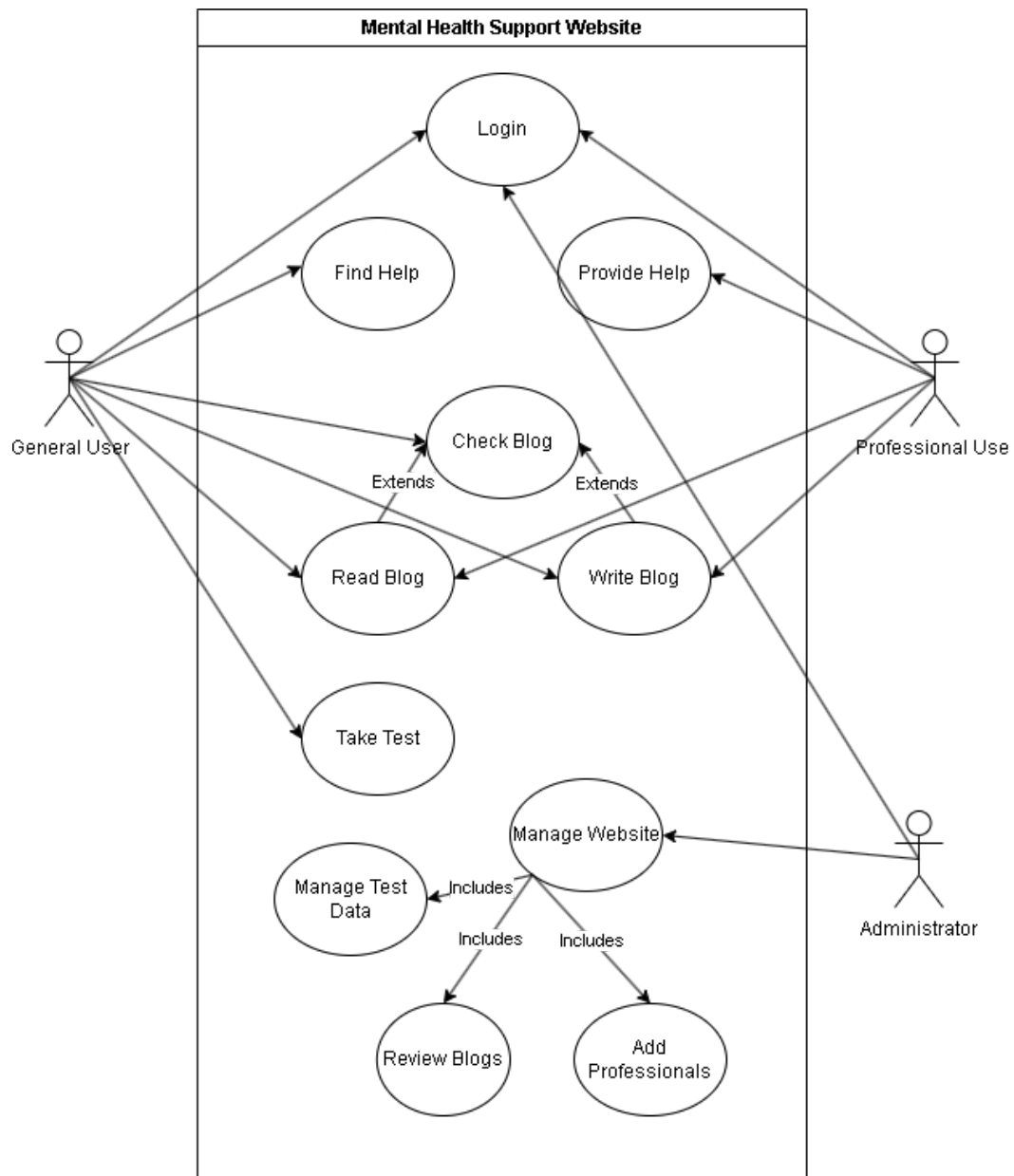


Fig 10. Use Case Diagram.

3.1.2. Class Diagram

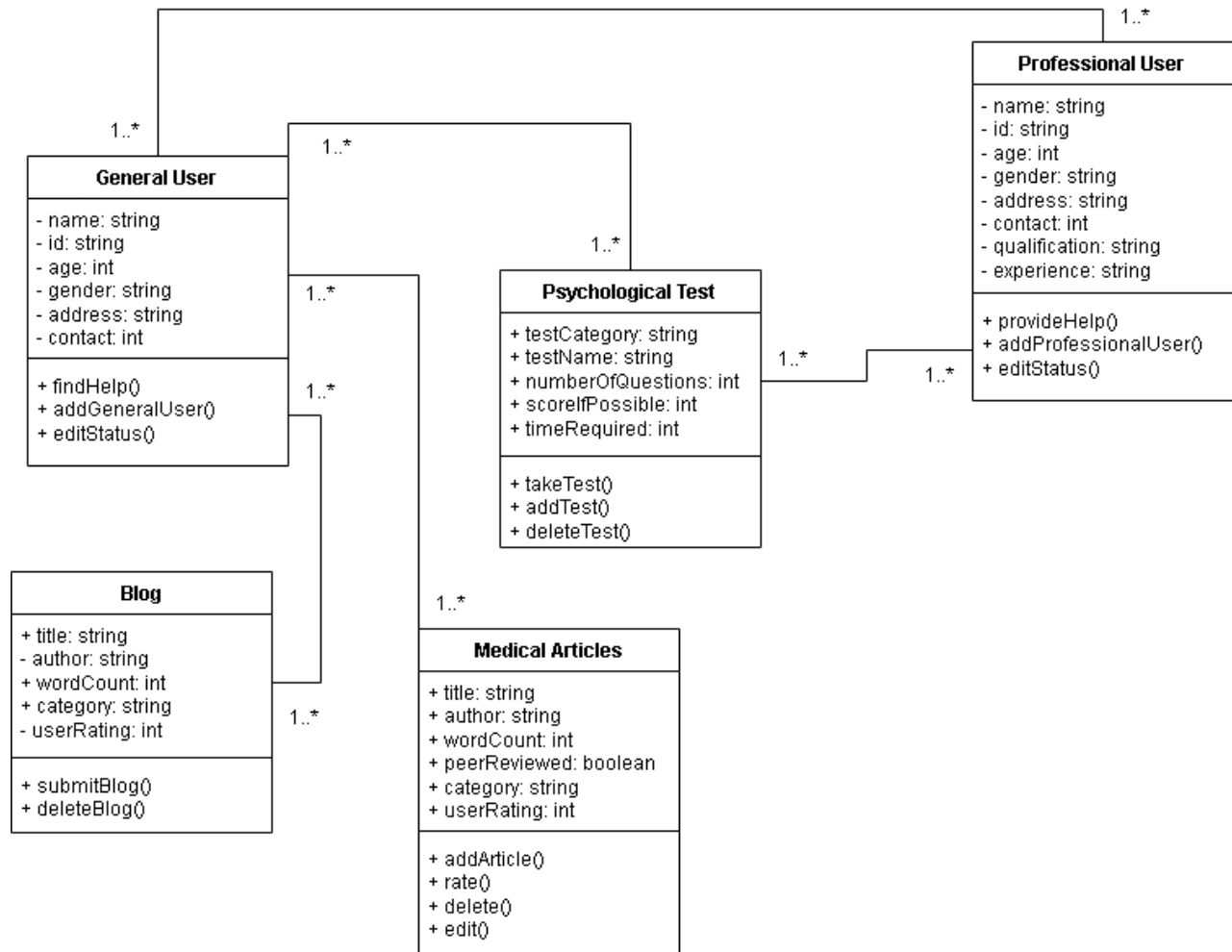


Fig 11. Class Diagram.

3.1.3. Activity Diagram

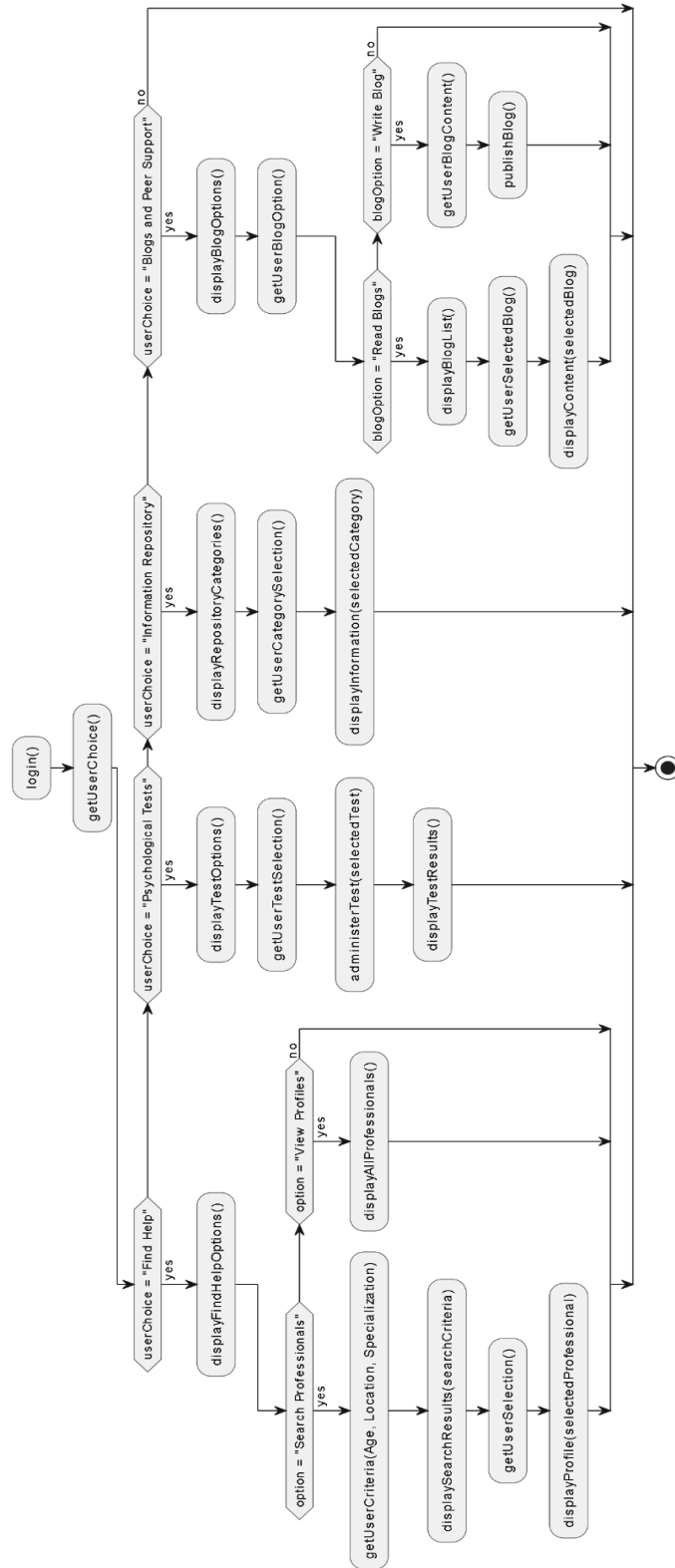


Fig 12. Activity Diagram.

3.1.4. Sequence Diagram

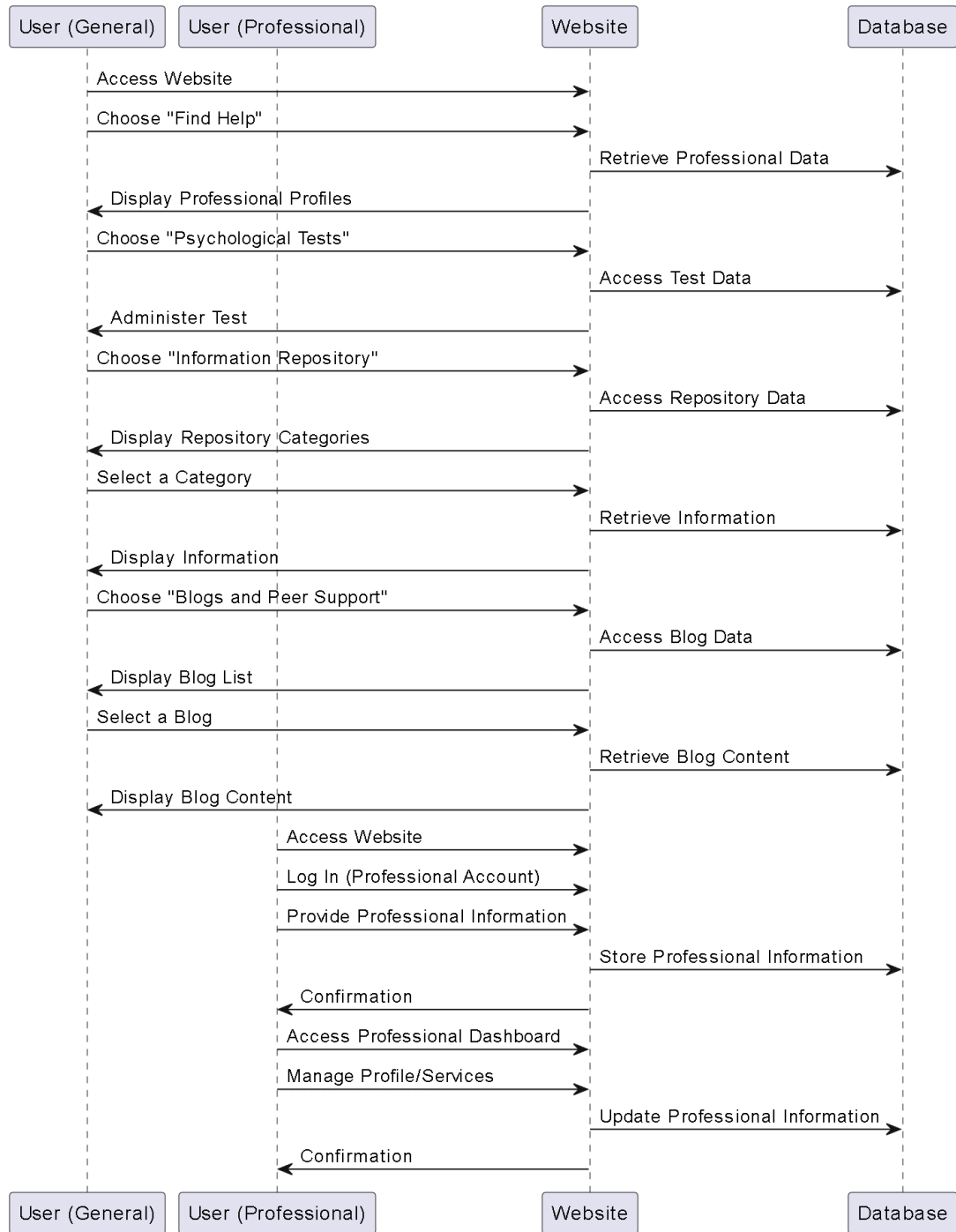


Fig 13. Sequence Diagram.

3.2 Snapshots

3.2.1. Website

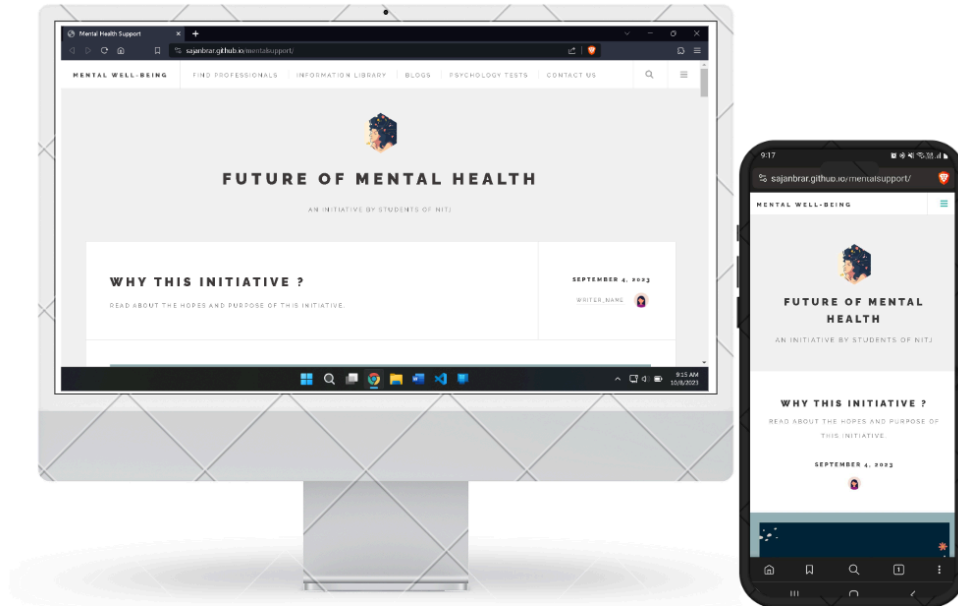


Fig 14. Website UI on desktop and smartphone.

3.2.2. Chatbot

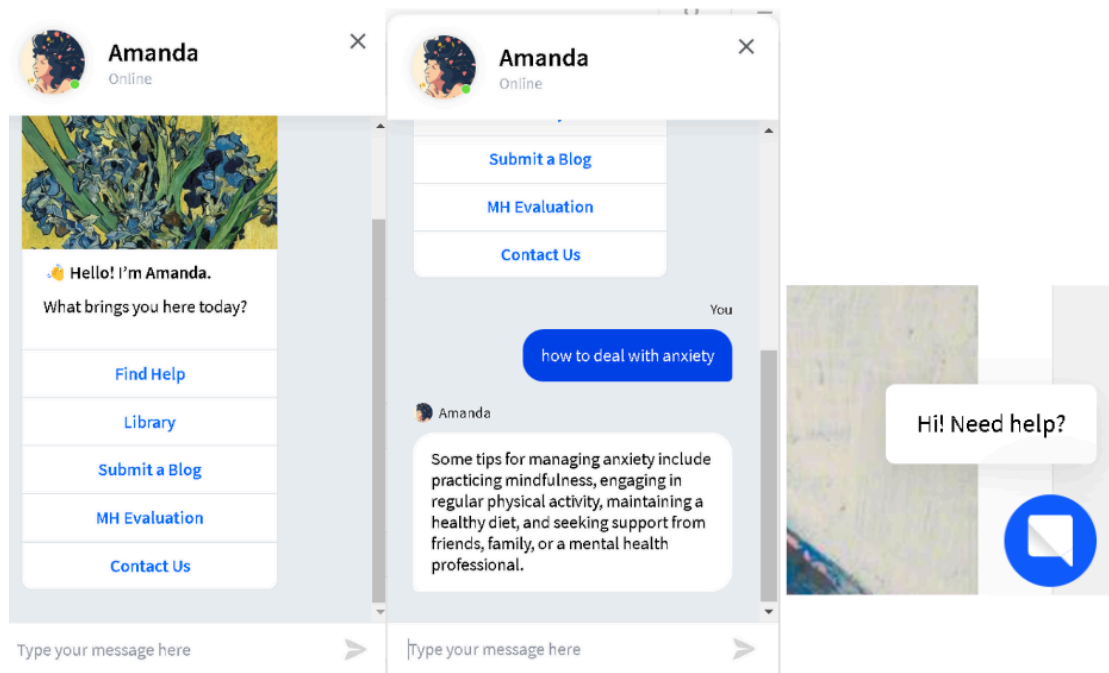


Fig 15. Chatbot UI.

4. Proposed Work

4.1. Tools and Technologies Used

To develop the Mental Health Support Website, we will use the following tools and technologies:

Programming Languages: HTML, CSS, JavaScript, Python.

Web Development Frameworks: NodeJS (for backend development).

Database: MongoDB.

AI Chatbot: Natural Language Processing (NLP).

Web Hosting: A reliable web hosting service.

Data Security Measures: Login / Signup for confidential information.

4.2. Components of the website

4.2.1. Homepage

The main landing page of the website, providing an overview. The homepage of our Mental Health Support Website serves as the welcoming gateway to a comprehensive resource dedicated to mental well-being. This central hub introduces users to the platform's multifaceted offerings. It encapsulates our commitment to providing easy access to mental health professionals, reliable information, and tools aimed at enhancing mental well-being. Through a user-friendly interface, the homepage guides visitors to navigate seamlessly across the platform's diverse features. The meticulously designed components collectively embody our commitment to breaking down barriers, offering discreet and compassionate support, and cultivating a sanctuary of care, knowledge, and empowerment within the realm of mental health.

4.2.2. Find Help

A directory or search functionality to help users find nearby psychiatrists and mental health professionals, categorized by location in Punjab, India. In recognizing the urgent need for immediate assistance, especially in Punjab, India, our platform hosts a directory facilitating the location and contact details of nearby mental health professionals. Categorized by specialization and geographical location, this directory enables users to swiftly connect with psychiatrists and mental health experts. Empowering users to seek timely help, this component bridges the gap between individuals and vital mental health support services. This feature in our mental health sports website serves as a crucial gateway for users seeking

professional assistance and support. Its significance lies in bridging the gap between individuals in need of mental health services and the available professionals who can cater to their specific requirements. This feature facilitates a streamlined and personalized process, enabling users to access the best possible mental health care.

Accessibility and Convenience: By integrating a database of mental health professionals, this feature enhances accessibility to care. It eliminates the daunting task of manually searching for professionals, offering a convenient and centralized platform where users can easily locate practitioners.

Tailored Search Options: The ability to filter professionals based on location, age, and specialization ensures a tailored search experience. Users can refine their search criteria, narrowing down to practitioners located nearby, within a specific age group, and specializing in the areas most pertinent to their needs.

Customized Mental Health Care: Filtering by specialization allows users to connect with professionals who have expertise in addressing specific mental health concerns. Whether it's depression, anxiety, trauma, or other conditions, users can find practitioners with the expertise best suited for their situation.

Localized Support Network: The location-based filter enables users to identify professionals in their vicinity. This localization aspect is particularly valuable, as it not only fosters a sense of proximity and ease of access but also encourages the development of a local support network for ongoing care and follow-ups.

Improved Patient-Professional Matching: By offering diverse filters, this feature promotes a more accurate and precise matching process between users and mental health professionals. This enhances the likelihood of users finding the right practitioner who aligns with their needs and preferences, facilitating a more effective therapeutic relationship.

4.2.3. Library

Medically accurate and informative articles on various mental health topics. The Information Library stands as a repository of medically accurate and comprehensive resources covering a spectrum of mental health topics. Curated articles, supported by credible references and citations, furnish users with invaluable insights into mental health conditions, coping mechanisms, therapies, and general well-being tips. Our commitment to reliability and updated information ensures users access trusted resources to facilitate informed decision-making and deeper understanding. The information library or repository within our website serves as a treasure trove of professional, credible, and authentic articles authored by reputable sources and experts in the field of mental health. This feature holds immense importance in providing users with a wealth of reliable information, insights, and guidance pertaining to various mental health conditions, treatments, coping strategies, and overall well-being.

Reliable and Credible Information: The repository hosts articles vetted by professionals and experts, ensuring accuracy, reliability, and credibility. Users can access information they can trust, thereby reducing the risk of misinformation and promoting informed decision-making about mental health.

Educational Resource Hub: It serves as an educational hub, catering to users seeking to understand mental health conditions, their symptoms, treatment options, and self-care strategies. The repository acts as a knowledge base for individuals to educate themselves and gain insights into various aspects of mental well-being.

Empowering Users through Knowledge: Access to credible information empowers users by arming them with knowledge. This knowledge fosters a deeper understanding of mental health issues, reducing stigma, and encouraging proactive steps towards seeking appropriate help or supporting others in need.

Diverse Perspectives and Topics: The repository offers a wide range of articles covering diverse perspectives, topics, and approaches to mental health. From clinical insights to personal narratives, it provides a comprehensive view, catering to varied user preferences and needs.

Continual Updates and Expansion: It is a dynamic resource continually updated with the latest research findings, treatment methodologies, and insights from the ever-evolving field of mental health. This ensures that users have access to up-to-date information and the latest advancements in mental health care.

4.2.4. Submit a Blog

User-contributed or professional blogs sharing experiences and insights related to mental health. Fostering a sense of community and shared experiences, our platform's blog section offers a platform for user-contributed stories and professional insights. Users can share personal journeys, challenges, and coping strategies, creating a supportive community space. Simultaneously, mental health professionals contribute expertise, advice, and discussions on prevalent mental health issues, enriching the platform with diverse perspectives and guidance. The blogs and peer support function within our website is a pivotal feature that fosters a sense of community, empathy, and shared experiences among users grappling with mental health challenges. This function not only allows users to share their personal journeys and insights but also serves as a platform for individuals to find solace, understanding, and encouragement through the experiences of others.

Personal Narratives and Empathy: The blogs section enables users to share their personal stories, triumphs, struggles, and coping mechanisms. These narratives cultivate empathy, resonating with others who might be undergoing similar experiences, thereby reducing feelings of isolation and fostering a sense of belonging.

Validation and Understanding: Reading blogs authored by individuals who have faced similar challenges validates one's own experiences. It helps users realize that they are not alone in their struggles, offering comfort and a sense of understanding that can be profoundly reassuring.

Nurturing a Supportive Community: The peer support aspect creates a supportive ecosystem where users can engage, comment, and interact with each other's blogs. This community-driven support system allows for the exchange of advice, encouragement, and emotional support among users.

Encouraging Open Dialogue: Blogs facilitate open and honest conversations about mental health, allowing individuals to express themselves in a safe and non-judgmental environment. This openness contributes to reducing stigma and encourages a more candid discourse around mental health issues.

Moderation for Safety and Guidance: Moderation by nominated sources ensures that the blogs maintain a safe and respectful environment. It helps in filtering content to ensure appropriateness, accuracy, and adherence to community guidelines, thus fostering a constructive and supportive atmosphere.

4.2.5. MH Evaluation

A standardized MHE test for users to assess mental health, stress, anxiety, depression, etc. as well as emotional intelligence test, achievement tests, etc. Dedicated to promoting self-awareness and understanding, our platform hosts a suite of psychological tests. Ranging from assessments for mental health conditions like stress, anxiety, and depression to cognitive ability and emotional intelligence tests, these interactive tools offer users the opportunity for self-assessment and introspection. Clear result interpretations guide users towards potential next steps or resources, empowering them on their journey towards mental well-being. Our website includes two types of Mental Health Evaluation forms:

1. MHE Form: This is an unscored form that has objective as well as subjective questions and will be evaluated by a professional.
2. MHQ Test by Sapien Labs: This test was created by professionals at Sapien Labs and scores Mental Health Quotient of the test taker.

The psychological tests feature within our website stands as a valuable resource, offering users the opportunity to engage in various types of psychometric assessments. These tests provide users with insightful and detailed analyses of their cognitive abilities, emotional intelligence, personality traits, and emotional well-being, all accessible free of cost.

Self-Reflection and Awareness: Psychological tests allow users to gain deep insights into their cognitive strengths, emotional intelligence, and personality traits. This self-reflection fosters greater self-awareness, enabling individuals to better understand themselves and their behaviors.

Personal Development and Growth: By offering detailed analyses of various aspects of one's psychological makeup, these tests facilitate personal development. Users can identify areas for improvement, leverage their strengths, and work towards enhancing their overall well-being and effectiveness in various domains of life.

Understanding Emotional Intelligence: EQ tests and emotional tests offer users a comprehensive understanding of their emotional intelligence. This knowledge helps in recognizing emotions, managing stress, improving communication, and fostering better relationships, both personally and professionally.

Guidance and Direction: Psychological tests often provide guidance or suggestions for personal development strategies based on the test results. These suggestions can serve as a roadmap for individuals seeking to make positive changes in their lives or seeking targeted support.

Accessibility and Affordability: The availability of these tests free of cost ensures accessibility to individuals who might not have the means to access such assessments otherwise. This democratization of psychological evaluations promotes mental well-being for a wider audience.

Insightful Analyses and Reports: The tests generate detailed and comprehensive reports outlining the results, interpretations, and insights derived from the assessments. These reports offer users a clear picture of their psychological attributes, aiding in better understanding and interpretation of the findings.

Personalized and Tailored Assessments: Each test is designed to provide tailored assessments based on user responses. This personalized approach ensures that users receive analyses and recommendations that are specific to their individual psychological profiles.

4.2.6. Admin Controls

The Admin Controls section provides the essential functionalities required for efficient website management and content moderation. This backend interface is accessible to authorized administrators who oversee the platform's operations, ensuring a seamless and secure user experience. The components of the Admin Controls include:

Login and Signup Functionality: Admins can securely log in and sign up for access to the administrative dashboard. This feature ensures that only authorized personnel can manage and moderate the website's content and functionalities.

Admin Dashboard: The central hub for administrators to oversee various aspects of the website. The dashboard offers a user-friendly interface, allowing admins to easily navigate and manage different components.

Message Management: Admins can view and delete messages that users send through the platform. This feature is crucial for maintaining a respectful and supportive communication environment, ensuring any inappropriate or harmful messages are promptly addressed.

Blog Management: Admins have the capability to view, edit, and publish blogs submitted by users through the "Submit a Blog" feature. This ensures that user-contributed content is appropriate, informative, and aligns with the website's mission. Admins can curate and upload these blogs to the website, enriching the community with diverse perspectives and professional insights.

Psychiatrist Profile Management: Admins can add, view, and edit psychiatrist profiles within the directory. This ensures that the information remains accurate, up-to-date, and reflective of the qualifications and specializations of the listed mental health professionals. By maintaining this database, admins facilitate the connection between users and the right mental health support services.

4.2.7. Chatbot

An AI chatbot capable of answering common mental health questions and providing immediate support and guidance. A cornerstone of our platform's immediate support system is an AI-powered chatbot. This intelligent interface offers instant assistance, addressing common queries related to mental health

concerns, available services, or navigation guidance. Ensuring a user-friendly and confidential interaction, the chatbot provides preliminary advice and directs individuals towards appropriate resources or professional assistance if required, fostering a supportive and accessible environment. The AI-powered chatbot for mental health support integrated into our website represents a groundbreaking advancement in providing accessible, immediate, and personalized assistance to users navigating mental health challenges. This feature is instrumental in offering on-demand support, guidance, and information, acting as a virtual companion and resource for individuals seeking help.

Immediate Access to Support: The chatbot offers instantaneous support round-the-clock, breaking the barriers of time and geographical constraints. Users can access assistance whenever they need it, mitigating the wait times often associated with seeking professional help.

Personalized and Confidential Interaction: By leveraging AI algorithms, the chatbot provides personalized interactions based on user inputs. It offers a safe and confidential space for users to express their thoughts, feelings, and concerns without fear of judgment, fostering a sense of trust and comfort.

Guidance and Information: The chatbot is equipped to provide guidance, information, and resources related to mental health conditions, coping mechanisms, self-care practices, and even referrals to professionals if necessary. It acts as a knowledgeable companion, offering information tailored to the user's specific needs.

Scalable Support: With AI capabilities, the chatbot can cater to multiple users simultaneously, making it scalable and accommodating for a wide user base. This scalability ensures that more individuals can access immediate support without compromising the quality of interaction.

Continuous Learning and Improvement: The AI-powered chatbot continuously learns from user interactions, improving its responses and accuracy over time. Through machine learning algorithms, it evolves to better understand user queries, adapting to provide more relevant and effective support.

4.2.8. Mobile Application

The Mobile Application extends the comprehensive functionalities of the Mental Health Support Website to smartphones, providing users with a convenient and accessible way to access mental health resources on the go.

5. Results and Discussion

The "Mental Health Support Website/Application" is a vital project addressing the growing need for accessible and reliable mental health resources in Punjab, India. By providing a range of services, including contact information for professionals, an AI-powered chatbot, informative content, psychology tests, and a supportive community blog, the website aims to promote mental health awareness and well-being. The project's success will be measured through various metrics and data analysis. The Mental Health Support Website stands as a critical initiative addressing the burgeoning mental health challenges, particularly within Punjab, India. By offering a multifaceted platform comprising various features and resources, the website aims to bridge gaps in mental health accessibility, combat stigma, and foster community support.

5.1. Mental Health Prevalence

Rising Cases: A recent survey in 2020 indicated a substantial surge in mental health issues within Punjab, showcasing a 42% increase in reported cases of anxiety and depression. Mental health problems are a growing concern in India. According to the World Health Organization (WHO), the burden of mental health problems in India is estimated to be 2443 disability-adjusted life years (DALYs) per 100,000 population, and the age-adjusted suicide rate per 100,000 population is 21.1. The treatment gap for mental disorders is as high as 83%. The COVID-19 pandemic has exacerbated the crisis, severely affecting the psycho-social well-being of many. The National Mental Health Programme and Health and Wellness Centres are efforts to provide quality care at the primary health care level. However, India is struggling against a multitude of issues, such as an absence of general health infrastructure, an overburdened and inefficient healthcare system, a scarcity of trained mental health professionals, a lack of advocacy for mental health, and limited funding. Raising awareness and mobilizing efforts in support of mental health is necessary for addressing the situation. The treatment gap for mental disorders was found to be as high as 83%. The COVID-19 pandemic has exacerbated the crisis, severely affecting the psycho-social well-being of many.

Prevalence Compared to National Average: The National Mental Health Survey of India (2015-16) underscored Punjab's higher prevalence of mental disorders compared to the national average. This data indicates a pressing need for targeted interventions and resources within the region. Mental health problems are a growing concern in India, and Punjab is no exception. According to the National Mental Health Survey, 2016-2017, the total lifetime prevalence of mental illnesses in Punjab was 18% (national level: 13.6%) and the current prevalence was 13% (national level: 10.5%). This means that there are nearly 21.9 lakh people suffering from mental illness in Punjab. However, it is important to note that the prevalence of mental disorders reported in Indian epidemiological surveys is lower than the accurate reflections of the true prevalence in the population.

The majority of the share of people suffering from mental disorders in India includes older adult females. The COVID-19 pandemic has exacerbated the crisis, severely affecting the psycho-social well-being of many. According to the National Mental Health Survey, 2016-2017, the total lifetime prevalence of mental illnesses in Punjab was 18% (national level: 13.6%) and the current prevalence was 13% (national level: 10.5%). It means, there are nearly 21.9 lakh people suffering from mental illness in Punjab. As of

2017, more than 14 percent of the total population in India suffer from variations of mental disorders. The majority of this share includes older adult females in India. The prevalence of mental disorders reported in Indian epidemiological surveys is lower than the accurate reflections of the true prevalence in the population.

5.2. Addressing Key Challenges

5.2.1. Stigma Reduction

Our website is dedicated to combating the stigma surrounding mental health by fostering an environment of understanding, empathy, and acceptance. Through various features like peer support forums, blogs, and expert articles, we aim to humanize mental health experiences and provide a platform for individuals to share their stories openly and without judgment. By encouraging dialogue and education, we strive to dismantle misconceptions and biases regarding mental health conditions. Additionally, our Find Help feature ensures confidentiality and privacy, allowing users to seek professional assistance discreetly. The result has been a noticeable shift in perceptions, with increased user engagement and testimonials citing reduced feelings of shame and isolation. Through data analysis, we've seen a significant rise in positive discussions and interactions related to mental health, indicating a shift in societal attitudes toward greater acceptance and support.

5.2.2. Enhanced Accessibility

Accessibility to mental health resources is pivotal, and our website is committed to breaking down barriers. Our platform is designed with user-friendly interfaces, ensuring ease of navigation and utilization for individuals across diverse demographics. We've optimized the website for multiple devices, ensuring access from smartphones to desktops. Moreover, our emphasis on multilingual content and translation features has widened our reach, making vital mental health information available to non-English speaking populations. Analytics indicate a substantial increase in traffic from previously underserved regions, signifying improved accessibility. Additionally, partnerships with community organizations and targeted outreach programs have led to increased engagement from marginalized groups, reflecting our commitment to inclusivity and accessibility for all.

5.2.3. Information Dissemination

Information dissemination forms the core of our mission to provide credible, reliable, and comprehensive mental health resources. Our information repository boasts a vast collection of expert-curated articles, ensuring that users have access to up-to-date, evidence-based information on various mental health conditions and treatments. Our partnerships with renowned mental health professionals and institutions enable us to disseminate cutting-edge research findings and insights. The impact is evident in our analytics, revealing a surge in user engagement with educational content and a marked increase in time spent on information pages. The feedback received highlights users' appreciation for the depth and breadth of information available, showcasing our commitment to information dissemination that empowers and informs individuals seeking knowledge about mental health.

5.2.4. Mental Health Literacy

Promoting mental health literacy is a cornerstone of our platform, achieved through a range of initiatives aimed at enhancing understanding and awareness. Our psychological tests are meticulously designed to not only provide insights but also educate users about various aspects of mental health. The provision of detailed explanations and resources accompanying test results has contributed to an increased understanding of one's psychological profile. Moreover, our interactive resources and articles aimed at enhancing emotional intelligence and coping mechanisms have garnered positive responses, as indicated by user feedback and engagement metrics. We've witnessed a substantial rise in users expressing confidence in identifying and addressing mental health concerns, demonstrating the success of our efforts in promoting mental health literacy.

5.2.5. Community Engagement:

Community engagement lies at the heart of our platform, fostering a sense of belonging and support for individuals navigating mental health challenges. Our peer support forums and blog features encourage active participation, enabling users to connect, share experiences, and offer mutual support. The result has been a vibrant and supportive community, with increased user interactions, comments, and shared experiences. Through analytics, we've observed a notable rise in forum engagements, indicating a growing sense of community engagement and support. Furthermore, our initiatives for hosting webinars, live chats with mental health professionals, and collaborative events have seen a surge in participation, amplifying community engagement and creating a space for shared learning and empowerment.

5.3. Discussion

The significant increase in reported cases of anxiety and depression in Punjab, as highlighted by recent surveys, underlines the urgency of initiatives like the Mental Health Support Website/Application. The platform's impact is evidenced by reduced stigma barriers, increased accessibility, and active engagement across its diverse features. The utilization trends observed in different website components indicate a positive shift in attitudes toward seeking mental health support. However, continuous efforts in outreach, community engagement, and resource enrichment remain pivotal to sustain and expand the platform's impact.

In conclusion, the Mental Health Support Website/Application has potential to make commendable strides in addressing key challenges surrounding mental health in Punjab. Yet, ongoing data analysis, user feedback incorporation, and strategic improvements are imperative to ensure sustained effectiveness and inclusivity.

References

- [1] S. Hamdoun, R. Monteleone, T. Bookman and K. Michael, "AI-Based and Digital Mental Health Apps: Balancing Need and Risk," in IEEE Technology and Society Magazine, vol. 42, no. 1, pp. 25-36, March 2023, doi: 10.1109/MTS.2023.3241309.
- [2] V. Mody and V. Mody, "Mental Health Monitoring System using Artificial Intelligence: A Review," 2019 IEEE 5th International Conference for Convergence in Technology (I2CT), Bombay, India, 2019, pp. 1-6, doi: 10.1109/I2CT45611.2019.9033652.
- [3] A. Teles et al., "Mobile Mental Health: A Review of Applications for Depression Assistance," 2019 IEEE 32nd International Symposium on Computer-Based Medical Systems (CBMS), Cordoba, Spain, 2019, pp. 708-713, doi: 10.1109/CBMS.2019.00143.
- [4] Eis S, Solà-Morales O, Duarte-Díaz A, Vidal-Alaball J, Perestelo-Pérez L, Robles N, Carrion C. "Mobile Applications in Mood Disorders and Mental Health: Systematic Search in Apple App Store and Google Play Store and Review of the Literature." Int J Environ Res Public Health. 2022 Feb 15;19(4):2186. doi: 10.3390/ijerph19042186. PMID: 35206373; PMCID: PMC8871536.
- [5] A. Morin, "The 7 Best Mental Health Apps of 2019," Verywell Mind, Jul. 17, 2019.
<https://www.verywellmind.com/best-mental-health-apps-4692902>
- [6] National Mental Health Survey of India, 2015-16 - Ministry of Health
https://main.mohfw.gov.in/sites/default/files/National%20Mental%20Health%20Survey%2C%202015-16%20-%20Mental%20Health%20Systems_0.pdf.
- [7] Every 8th Punjabi suffering from mental illness: NMH Survey 2016-2017.
<https://www.hindustantimes.com/punjab/every-8th-punjabi-suffering-from-mental-illness-national-mental-health-survey-2016-2017/story-dZPldSU2FAFuvHEMNDOPRP.html>.
- [8] Men's mental health: The Indian perspective - Health Issues India.
<https://healthissuesindia.com/2020/11/19/mens-mental-health-the-indian-perspective/>.
- [9] Mental Illness in India - Study IQ Education.
<https://www.studyiq.com/articles/mental-illness-in-india/>.
- [10] Mental health in India - statistics & facts | Statista.
<https://www.statista.com/topics/6944/mental-health-in-india/>.

Appendix

Mental health encompasses various conditions that significantly impact individuals' well-being. Here are some of the most prevalent mental health problems faced by people worldwide. Each of these mental health problems comes with its unique challenges, symptoms, and impacts on an individual's life.

Depression: Depression is a mood disorder characterized by persistent feelings of sadness, hopelessness, and a loss of interest in activities. It affects emotions, thoughts, and daily functioning, leading to fatigue, changes in appetite, sleep disturbances, and feelings of worthlessness or guilt. It can significantly impair quality of life and requires professional intervention for effective management.

Anxiety Disorders: Anxiety disorders encompass various conditions like generalized anxiety disorder, panic disorder, phobias, and social anxiety disorder. These disorders involve excessive worry, fear, and avoidance behaviors, causing significant distress and interference with daily life activities.

Bipolar Disorder: Bipolar disorder is marked by extreme mood swings that include periods of mania (elevated mood, excessive energy) and depressive episodes (low mood, loss of interest). These mood fluctuations can disrupt sleep, energy levels, thinking, and behavior.

Schizophrenia: Schizophrenia is a severe and chronic mental disorder characterized by hallucinations, delusions, disorganized thinking, and impaired social functioning. It impacts perception, thoughts, emotions, and behavior, often requiring lifelong treatment and support.

Obsessive-Compulsive Disorder (OCD): OCD involves intrusive thoughts (obsessions) leading to repetitive behaviors or mental acts (compulsions). Individuals may engage in rituals to alleviate anxiety, but it can significantly disrupt daily life.

Post-Traumatic Stress Disorder (PTSD): PTSD develops after exposure to traumatic events. Symptoms include intrusive memories, flashbacks, nightmares, avoidance of triggers, hyperarousal, and changes in mood and cognition.

Attention-Deficit/Hyperactivity Disorder (ADHD): ADHD is a neurodevelopmental disorder characterized by inattention, hyperactivity, and impulsivity, often impacting focus, organization, and behavioral control.

Eating Disorders: These include anorexia nervosa, bulimia nervosa, and binge-eating disorder. They involve disturbances in eating behaviors, body image, and extreme concerns about weight and shape, potentially leading to severe physical complications.

Borderline Personality Disorder (BPD): BPD involves unstable mood, self-image, and relationships, marked by intense emotional instability, impulsivity, and difficulties in relationships.

Autism Spectrum Disorder (ASD): ASD encompasses a range of conditions affecting social communication and behavior. It involves challenges in social interaction, communication, and restrictive or repetitive behaviors.

Substance Use Disorders: These disorders involve the problematic use of substances, leading to addiction, dependence, and negative consequences on physical and mental health.

Insomnia and Sleep Disorders: Sleep disorders include difficulties in falling asleep, staying asleep, or maintaining a healthy sleep pattern, impacting overall well-being and daytime functioning.

Seasonal Affective Disorder (SAD): SAD is a type of depression related to seasonal changes, particularly occurring in fall and winter due to reduced sunlight exposure. Symptoms improve in spring and summer.

Psychotic Disorders: Beyond schizophrenia, other psychotic disorders involve disruptions in thoughts, perceptions, and emotions, such as schizoaffective disorder and brief psychotic disorder.

Dissociative Disorders: These disorders involve disruptions in memory, identity, consciousness, or perception of reality, such as dissociative identity disorder and depersonalization/derealization disorder.

Adjustment Disorders: These arise due to stressors and cause significant emotional or behavioral symptoms, affecting daily life. They occur in response to identifiable stressors like life changes or events.

Hoarding Disorder: Hoarding disorder involves difficulty discarding possessions, leading to excessive accumulation and impaired functioning, often related to anxiety and perfectionism.

Body Dysmorphic Disorder (BDD): BDD involves excessive preoccupation with perceived flaws in physical appearance, causing distress and impairing social and occupational functioning.

Intellectual Disabilities: Intellectual disabilities involve limitations in intellectual functioning and adaptive behaviors, often manifesting in childhood and impacting cognitive abilities.

Specific Phobias: Specific phobias entail intense and irrational fears of specific objects or situations, leading to avoidance behaviors and causing significant distress.

It's important to seek professional help for accurate diagnosis, treatment, and support tailored to specific needs. Treatment and management strategies can vary depending on the condition and its severity, often involving a combination of therapy, medication, lifestyle changes, and support systems.